Jasper County

Lead Mining Site

Institutional Controls

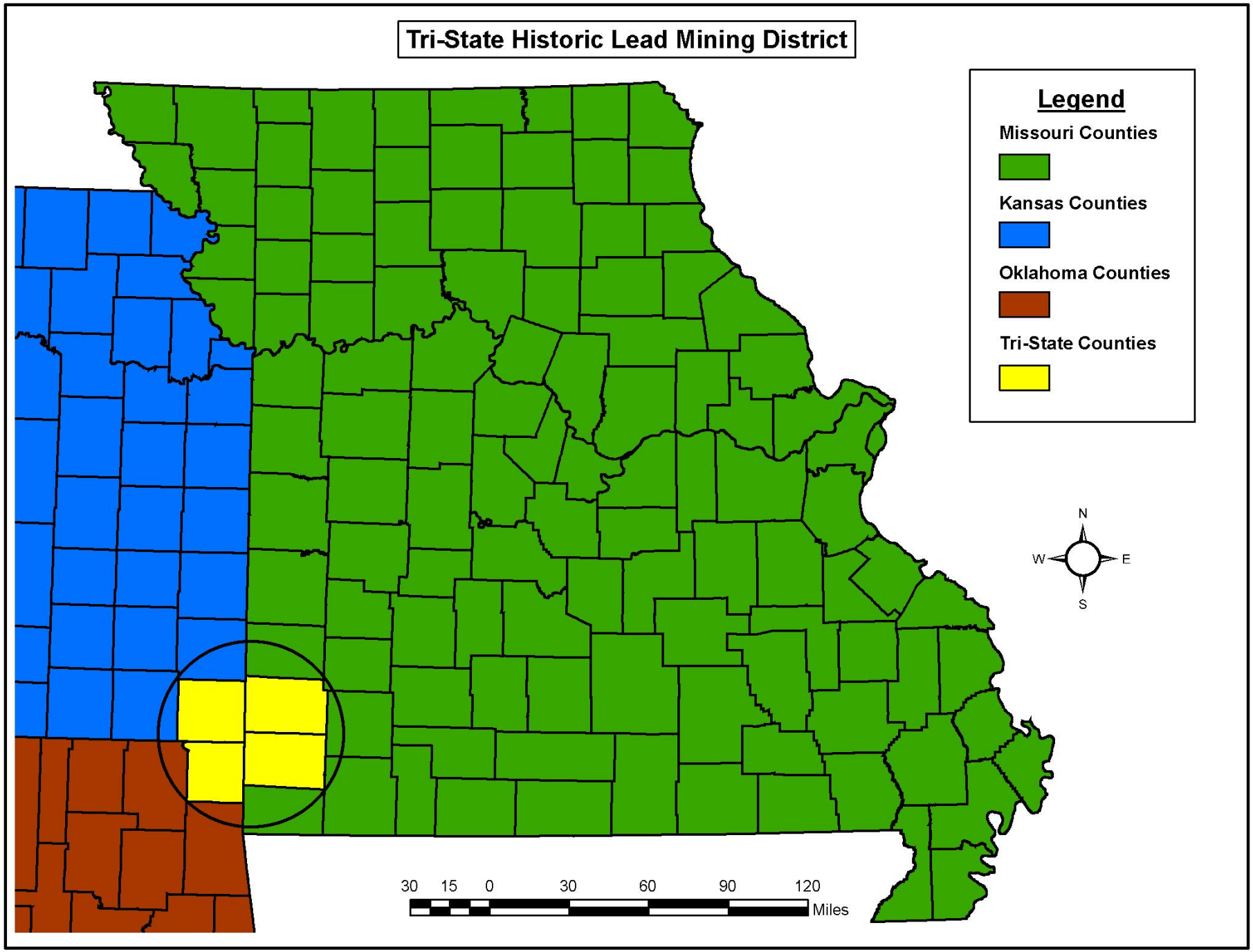
Missouri Department of Natural Resources

Jasper County Lead Mining Site

(Part of the Large Tri-State Historic Mining District)

From the 1850s to 1960s highest producing zinc and lead mining area in the world!

Missouri is still #1 in the US in lead production


Tri-State Historic Lead Mining District
Legend
Missouri Counties
Kansas Counties
Oklahoma Counties
Tri-State Counties
N
W
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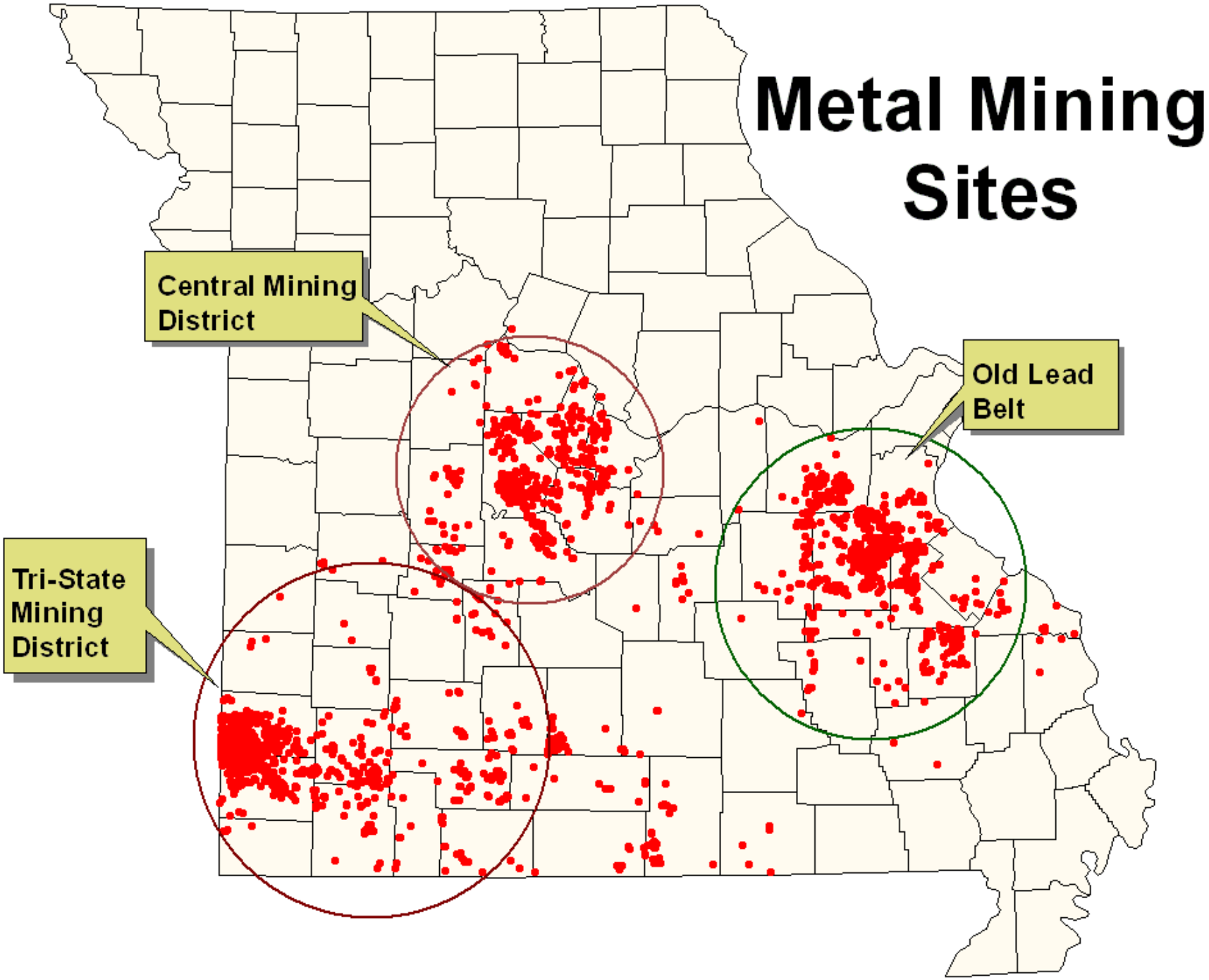
30 15 0 30 60 90 120
Miles


Jasper County Site


Metal Mining Sites
Central Mining District
Old Lead Belt
Tri-State Mining District

Unregulated mining and smelting activities in Jasper County left behind waste material that has contaminated

7000 thousand acres,

many miles of streams, and

50 square miles of groundwater.


Subsidence pond, chat and tailings.


Jasper County Lead Site (also known as Oronogo-Duenweg Mining Belt Site) was placed on EPA’s National Priorities List in 1991

Jasper County mine-scarred land

Removals and Remedial Actions Accomplished

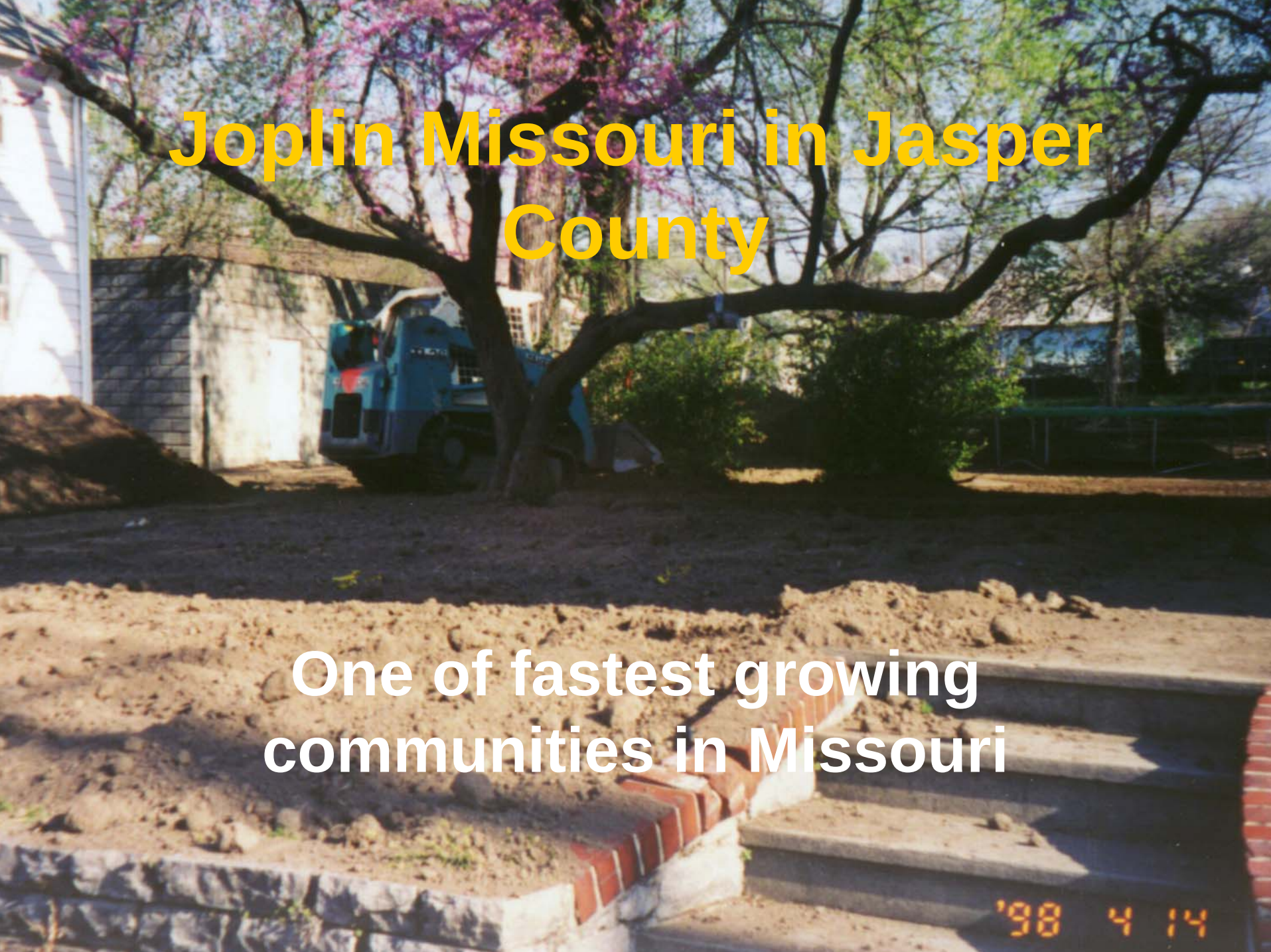
2500 Residential Yard Removals in Jasper County

1 Rural Public Water System Established in Jasper County

Extended lines from existing water systems for about 250 residences.

Residential drinking water deep wells drilled in Jasper

Part of new highway bypass covering much chat.


Joplin Missouri in Jasper County
One of fastest growing communities in Missouri
'98 4 14

Community Advisory Group 1994

Assisted the agencies in making decisions for the site.

Local Citizens

Community leaders from most towns

Real Estate leaders and developers

Financial and other business leaders

Educators

Health representatives

Farmers

By the late 1990s more environmental issues had been discovered in Jasper and Newton Counties.

NPL - Newton County Mining Site

NPL - Newton County TCE near Joplin

NPL - Pool's Prairie TCE site south of Neosho

Poultry and egg, Hog and Beef CAFOs

Several Potentially polluting Industries

CAG evolved into the Jasper/Newton Counties Environmental Task Force in 1998.

Develop an Environmental Master Plan.

Address all environmental issues in 2 counties.

Address need for Institutional Controls.

Make recommendations to local governments for ordinances to use as IC s.

Encourage state IC s.

Create ways to keep environmental problems from happening in the future.

Task Force Achievements

(With federal, state and local agencies' help)

Geographic Information System (GIS) developed for environmental planning.

Lead Education Curriculum developed and implemented in school districts.

Jasper County Ordinance for development established.

With the state, helped implement well drilling regulations for Jasper and Newton Counties.

Received 501c 3 designation in order to be able to apply for more grants (not for profit organization)

New 2006 Route 249 Redevelopment Plan

Why are Institutional Controls so Necessary?

Fast economic growth in the county

Rapidly changing land-use

Widespread contamination

High potential for human exposure

Groundwater is impacted by Pb, Cd,TCE

Many miles of Pb, Zn, Cd impacted streams

Barren Chat & Tailings

More Need for Institutional Controls

Hundreds of drinking water wells contaminated with Pb, Cd, TCE.

Upper aquifer contaminated, lower aquifer not.

Contamination of lower aquifer possible with new deep wells.

Developers started building on contaminated land.

Many new homes then needed yard soil remediation.

Pattern for creating new yards for remediation and new contaminated wells had to be broken.

Some developers started to voluntarily request that EPA or DNR sample their land before construction so they could remediate before building…. A very good sign!

Missouri Department of Natural Resources

Wellhead Protection Special Area

ROD for groundwater required state to develop special well drilling area.

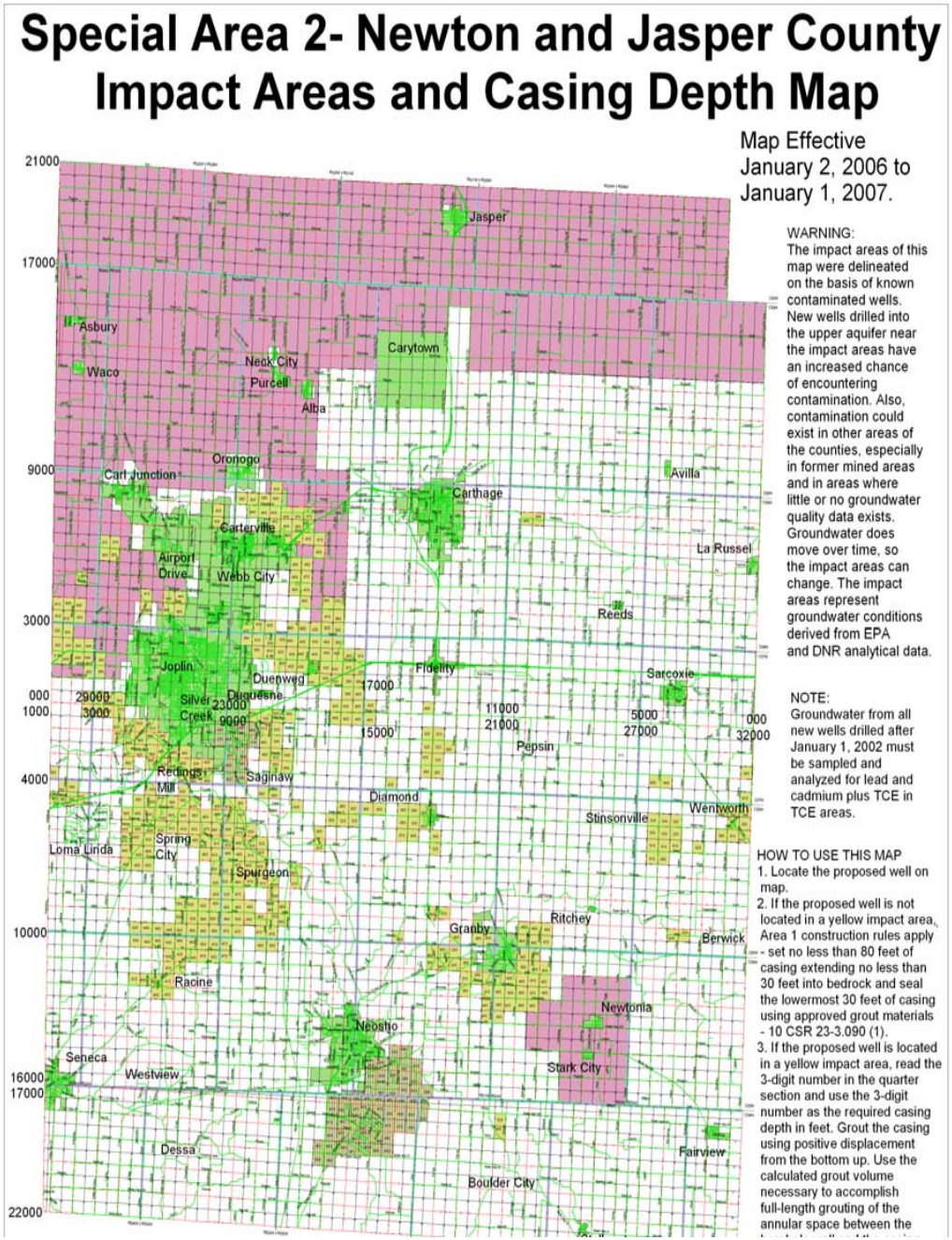
Many wells in the area contaminated with Pb or Cd or TCE

The upper aquifer is contaminated.

The lower aquifer is not contaminated.

Wells in the impacted area are required to have casing to a depth that is determined by MDNR regulations.

Map of impacted area has specific regulations.



Yellow- contaminated with Pb, Cd, TCE

Green- City water districts and extensions

Pink- Public water districts

Jasper County 2006 Environmental Contamination Ordinance

Building permits required for dwellings, child occupied facilities, and recreation areas.

All appropriate county offices must approve permit.

GIS maps outline areas that may be contaminated.

Property must be sampled if in the contamination area.

If property exceeds EPA action levels builder must remediate (fact sheet available to guide builders.)

If does not exceed EPA action levels permit granted.

Jasper County 2006 Environmental Contamination Ordinance (continued)

Builder develops remediation plan

County Health Department must approve remediation plan.

After remediation County Health Department does final inspection.

When approved, occupancy permit is granted.

County Health Department enforces ordinance restricting occupancy prior to completion of remediation.